

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method of transmitting an encoded sequence over a network to a terminal, comprising

storing a plurality of encoded versions of the same sequence, wherein each version comprises a plurality of discrete portions of data and each version corresponds to a respective different degree of compression;

transmitting a current one of said versions;

ascertaining the data rate permitted by the network;

ascertaining the state of fullness of a receiving buffer at the terminal;

for at least one candidate version, computing in respect of at least one discrete portion thereof as yet unsent the maximum value of a ~~timing-error~~ current buffer fullness that would ~~occur~~ be needed to avoid buffer underflow were any number of portions starting with that portion to be sent at the currently ascertained permitted rate;

comparing the determined maximum ~~error~~ needed buffer fullness value(s) with the ascertained current buffer fullness state;

selecting one of said versions for transmission, in dependence on the results of said comparisons; and

transmitting the selected version.

2. (Currently Amended) A method of transmitting an encoded sequence over a network to a terminal, comprising

storing a plurality of encoded versions of the same sequence, wherein each version comprises a plurality of discrete portions of data and each version corresponds to a respective different degree of compression;

for each version and for each of a plurality of nominal transmitting rates, computing in respect of at least one discrete portion thereof the maximum value of a timing error-current buffer fullness that would occur-be needed to avoid receiving buffer underflow at the terminal were any number of portions starting with that portion to be sent at the respective nominal rate;

storing said maximum ~~error~~ needed buffer fullness values;

transmitting a current one of said versions;

ascertaining the data rate permitted by the network;

ascertaining the state of fullness of a receiving buffer at the terminal;

for at least one candidate version, using the ascertained permitted data rate and the stored maximum ~~error~~ needed buffer fullness values to estimate a respective maximum ~~error~~ needed buffer fullness value corresponding to said ascertained permitted data rate;

comparing the estimated maximum ~~error~~ needed buffer fullness value(s) with the ascertained buffer state;

selecting one of said versions for transmission, in dependence on the results of said comparison(s); and

transmitting the selected version.

3. (Currently Amended) A method according to claim 1 in which said maximum ~~timing error~~ needed buffer fullness determination is performed only for selected ones of said portions at which a version change is to be permitted.

4. (Currently Amended) A method according to claim 1 in which each computed ~~timing error~~ needed buffer fullness value is the difference between (a) the time needed to transmit, at the relevant rate, the portion in question and zero or more consecutive subsequent portions up to and including any particular portion, and (b) the difference between the playing instant of the respective particular portion and the playing instant of the portion preceding the portion in question.

5. (Currently Amended) A method according to claim 1 in which the sequence is a video sequence.

6. (Original) A method according to claim 1 in which the sequence is an audio sequence.

7. (Currently Amended) A storage medium for storing a video recording,
~~recording stored on a carrier, comprising~~

a plurality of encoded versions of the same video sequence, wherein each version comprises a plurality of discrete portions of data and each version corresponds to a respective different degree of compression; and

for each discrete portion of each version and for each of a plurality of nominal transmitting rates, a maximum ~~error-value~~ of current buffer fullness for that portion ~~portion~~, being the maximum of (a) the value needed to avoid buffer underflow of a ~~timing error~~ that would occur were that portion to be sent at the respective nominal rate; and

(b) the values needed to avoid buffer underflow of a ~~timing error~~ that would occur were that portion and any number of subsequent portions subsequent thereto to be sent at the respective nominal rate.

8. (Currently Amended) A storage medium for storing an audio recording
~~stored on a carrier, comprising~~

a plurality of encoded versions of the same audio sequence, wherein each version comprises a plurality of discrete portions of data and each version corresponds to a respective different degree of compression; and

for each discrete portion of each version and for each of a plurality of nominal transmitting rates, a maximum ~~error~~-value of current buffer fullness for that portion, being the maximum of (a) the value needed to avoid buffer underflow ~~of a timing error~~ that would occur were that portion to be sent at the respective nominal rate; and

(b) the values needed to avoid buffer underflow ~~of a timing error~~ that would occur were that portion and any number of subsequent portions subsequent thereto to be sent at the respective nominal rate.

9. (Currently Amended) An apparatus for transmitting an encoded sequence over a network to a terminal, comprising

a store storing a plurality of encoded versions of the same sequence, wherein each version comprises a plurality of discrete portions of data and each version corresponds to a respective different degree of compression;

a transmitter; and

control means operable to receive data as to the data rate permitted by the network and data as to the state of fullness of a receiving buffer at the terminal and, for at least one candidate version, to compute in respect of at least one discrete portion thereof as yet unsent the maximum value of ~~a timing error~~ current buffer fullness that would ~~occur~~ be needed to avoid buffer underflow were any number of portions starting with that portion to be sent at the permitted rate, to compare the determined maximum ~~error~~ needed buffer fullness value(s) with the buffer fullness state and to select one of said versions for transmission, in dependence on the results of said comparisons.

10. (Currently Amended) An apparatus for transmitting an encoded sequence over a network to a terminal, comprising

a store storing a plurality of encoded versions of the same sequence, wherein each version comprises a plurality of discrete portions of data and each version corresponds to a respective different degree of compression, each version including, for each of a plurality of nominal transmitting rates, in respect of at least one discrete portion thereof, the maximum value of a timing-error-current buffer fullness that would ~~occur~~ be needed to avoid receiver buffer underflow at the terminal were any number of portions starting with that portion to be sent at the respective nominal rate;

a transmitter; and

control means for receiving data as to the data rate permitted by the network and data as to the state of fullness of a receiving buffer at the terminal and, for at least one candidate version, to use the permitted data rate and the stored maximum ~~error-needed~~ buffer fullness values to estimate a respective maximum ~~error-needed~~ buffer fullness value corresponding to said permitted data rate, to compare the estimated maximum ~~error-needed~~ buffer fullness value(s) with the buffer fullness state and to select one of said versions for transmission, in dependence on the results of said comparisons.